updating the accessed address to reflect a new address of the destination node responsive to a change in the address of the destination node to the new address;

sending a second packet by the source node to the destination node by using the new address; and

receiving the second packet by the destination node at the new address of the destination node.

2.   (Amended) The method of claim 1, wherein the source node and the destination node have a local address cache, and wherein the receiving the first packet step includes the steps of:

storing, in the local cache of the destination node, an address of the sending node; and

wherein the updating step further includes the steps of:

retrieving from the local cache of the destination node the address of the sending node;

sending a third packet containing the new address of the destination node to the source node by the destination node using the address of the source node;

receiving the third packet by the source node; and

storing, in the local cache of the source node, the new address of the destination node.

3.   (Amended) The method of claim 1, wherein the distributed system has a central address store, the method further comprising the steps of:

storing an address of the source node and the destination node in the central address store; and

wherein the sending a first packet step further includes the step of:

accessing the address of the destination node from the central address store; and

wherein the updating step further includes the steps of:

sending a third packet containing the new address of the destination node to the central address store by the destination node; and

storing the new address of the destination node in the central address store; and

accessing the new address by the source node.

5.   (Amended) The method of claim 1, wherein the source node and the destination node have a local address cache and communicate by using a multicast address such that a communication sent to the multicast address is sent to a multicast group including the source node and the destination node, and wherein the updating step further includes the steps of:

sending a joining request, by the destination node, to a router to add the new address of the destination node to the multicast group;

sending a message, by the source node, to the destination node via the multicast address;

receiving the message by the destination node;

sending a third packet containing the new address of the destination node by the destination node to the source node, using an address of the source node;

receiving the third packet by the source node; and

storing the new address of the destination node in the local cache of the source node.

8.   (Amended) A method in a distributed system for communicating in a network with a source node and a destination node, the method comprising the steps of:

receiving a first packet by the destination node, at an address of the destination node, from the source node, the packet being addressed to the address of the destination node, wherein the source node and the destination node are programs;

updating the address of the destination node to a new address responsive to a change in the address of the destination node to the new address; and

receiving a second packet by the destination node at the new address.

9.   (Amended) The method of claim 8, wherein the destination node has a local address cache, and wherein the receiving first packet step includes the steps of:

storing, in the local cache of the destination node, an address of the sending node; and

wherein the updating step further includes the steps of:

retrieving from the local cache of the destination node the address of the sending node; and

sending a third packet containing the new address of the destination node by the destination node to the source node, using the address of the source node.

10.   (Amended) The method of claim 8, wherein the distributed system has a central address store, the method further comprising the steps of:

storing an address of the source node and an address of the destination node in the central address store; and

wherein the updating step further includes the step of:

sending a third packet containing the new address of the destination node to the central address store by the destination node .

12.   (Amended) The method of claim 8, wherein the source node and the destination node have a local address cache and communicate by using a multicast address such that a communication sent to the multicast address is sent to a multicast group including the source node and the destination node, and wherein the updating step further includes the steps of:

sending a joining request, by the destination node, to a router to add the new address of the destination node to the multicast group;

receiving a message from the source node by the destination node, via the multicast address; and

sending a third packet containing the new address of the destination node by the destination node to the source node, using the address for the source node.

21.   (Amended) A data processing system for communicating in a network with a source node and a destination node, the data processing system comprising:

means for accessing an address of the destination node;

means for sending a first packet by the source node to the destination node by using the accessed address;